

INTERNATIONAL SEARCH REPORT

10/540668
 Rec'd PCT/PTO 24 JUN 2005
 PCT/IB 03/06135

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G06K7/10 G11B7/135 G02F1/29 G02F1/139 G02F1/1347
 G02F1/1335 G02B3/14 G02C7/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06K G11B G02F G02B G02C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 014 197 A (HIKMET RIFAT A M) 11 January 2000 (2000-01-11) column 6, line 32 - line 37	1-10, 13
Y	column 4, line 42 - column 5, line 48 column 8, line 28 - line 59 figures 1A, 1B, 4C, 10	11, 12, 14, 15
Y	US 4 037 929 A (BRICOT CLAUDE ET AL) 26 July 1977 (1977-07-26) column 2, line 55 - column 3, line 68 figures 2, 3	11, 12, 14, 15
X	US 6 317 190 B1 (HASEGAWA MASAKI ET AL) 13 November 2001 (2001-11-13) abstract column 4, line 1 - line 35 figures 1-4, 7, 8	1, 2, 13
	-/-	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

1 April 2004

Date of mailing of the international search report

13/04/2004

Name and mailing address of the ISA

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PCT/IB 03/06135

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 190 330 A (BERREMAN DWIGHT W) 26 February 1980 (1980-02-26) abstract column 2, line 39 -column 4, line 58 figures 1-3 -----	1-15

INTERNATIONAL SEARCH REPORT

PCT/IB 03/06135

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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US 4037929	A	26-07-1977	FR 2323160 A1 CA 1070810 A1 DE 2639556 A1 GB 1563113 A JP 1245063 C JP 52032348 A JP 59019324 B	01-04-1977 29-01-1980 17-03-1977 19-03-1980 25-12-1984 11-03-1977 04-05-1984
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Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA,
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM,
ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD,
SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY,
KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG,
CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT,
LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ,
CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
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